ABSTRACT

Electro-optically inspecting a longitudinally moving rod of material (12). Guiding rod (12) along its longitudinal axis by rod guiding unit (14), along optical path (20) within transparent passageway (22). Optical path (20) and transparent passageway (22) coaxially extend along longitudinal axis of rod (12) and pass through an electro-optical transmission module (24). Focused beam (28) from illumination unit (26) is transmitted through first side (30) of transparent passageway (22) and incident upon rod (12) within transparent passageway (22). Illuminating volumetric segment (34) of rod (12) by incident beam (32), such that incident beam (32) is affected by and transmitted through volumetric segment (34) and transmitted through second side (36) of transparent passageway (22), for forming rod material transmitted beam (38). Detecting transmitted beam (38) by detection unit (40), for forming rod material volumetric segment transmitted beam useable for determining internal properties and characteristics of rod of material (12).